

ICTS FOR INTERCULTURAL DIALOGUE

An Overview of UNESCO's Indigenous Communication Project

LAUREL EVELYN DYSON

*Faculty of Information Technology, University of Technology, Sydney,
PO Box 123 Broadway NSW 2007 Australia*

JUAN FRANCISCO SALAZAR

*School of Communication Arts, University of Western Sydney
Locked Bag 1797, Penrith South DC NSW 1797 Australia*

MAX HENDRIKS, JIM UNDERWOOD

*Faculty of Information Technology, University of Technology, Sydney,
PO Box 123 Broadway NSW 2007 Australia*

AND

ROBERT KAY

Westpac Banking Corporation, Sydney, Australia

Abstract. Using ICTs to preserve and revitalize Indigenous cultures and to promote intercultural dialogue is the aim of UNESCO's ICT4ID Project. Five pilot projects were conducted in 2004-2005 in Africa and South America to train Indigenous people in ICTs, support production of local content and assist in its distribution. Three of the projects focused on film-making; one on heritage management; and one on the making of a documentary and the design of a living cultural archive. This paper represents a preliminary evaluation of the pilot projects. Results show that all the projects have been successful in producing local content and providing at least some measure of distribution. However, projects have had varying success in terms of sustainability and varying success in achieving Indigenous self-representation.

1. Introduction

The Information and Communication Technologies for Intercultural Dialogue (ICT4ID) Project was launched at the International Forum on Local Cultural Expression and Communication, sponsored by UNESCO and held at Santo Domingo in the Dominican Republic in 2003 (UNESCO, 2005). In response to a call for proposals, 40 were received by UNESCO and out of these five Indigenous communities were selected, three in Africa and two in South America. These formed a two-year pilot which was evaluated prior to the continuation of the Project in 2006-2007. The broad aims of the Project are to use Information and Communication Technologies (ICTs) to preserve and revitalize Indigenous cultures and to promote their dissemination locally, nationally and internationally. Here ICT is taken in its widest sense to include computer, multimedia and Internet technologies as well as digital audiovisual technology, such as video and

sound recording equipment. The convergence of computing, telecommunications and broadcasting make it appropriate today to build projects around a combination of these technologies.

The ICT4ID Project is part of UNESCO's special mandate to ensure the preservation and promotion of world culture. The *Universal Declaration on Cultural Diversity* was adopted at the UNESCO General Conference in November 2001 (UNESCO, 2002) and reaffirmed more recently by the *Convention on the Protection and Promotion of the Diversity of Cultural Expressions* (UNESCO, 2005). It views cultural diversity as the common heritage which unites humanity, a source of individual but also collective wealth. It is "as necessary for humankind as biodiversity is for nature", is part of the democratic framework of society, and one of the roots of economic as well as personal development (UNESCO, 2002, Articles 1, 2 & 3). All people have the right to cultural expression in their language of choice, and have the right to access the means of expression and dissemination of their culture (Articles 5 & 6). Importantly, cultural rights are seen as an "ethical imperative" implying "a commitment to human rights and fundamental freedoms, in particular the rights of persons belonging to minorities and those of indigenous peoples" (Article 4).

Cultural exchange is fundamental to the *Universal Declaration on Cultural Diversity*. Produced in the aftermath of the September 11th terrorist attack on the World Trade Centre, the Declaration represents a rejection of ethnic hatred and an affirmation of intercultural dialogue as a guarantee of peace (Matsuura, forward to UNESCO, 2002). Moreover, intercultural dialogue is seen as necessary for creativity which, though having its roots in cultural tradition, also "flourishes in contact with other cultures" (Article 7). ICTs are seen to have a special, if contradictory, role in this dialogue between cultures: on the one hand as tools of globalization they pose a challenge to the maintenance of cultural diversity, but on the other hand they provide a new means for the promotion of mutual respect and tolerance (UNESCO, 2002). With their ability to furnish almost instantaneous communication over vast geographic distances, they give a way of linking even the most remote people on the planet. With their multimedia graphical and sound capabilities, they allow the full expression of the visual and oral cultural practices of Indigenous and other peoples.

To foster cultural diversity and intercultural dialogue UNESCO has launched a wide range of projects in the new millennium, many centered on developing countries, but not exclusively. Many of these employ audio-visual media, usually in conjunction with digital technology for editing, database storage, promotion, dissemination and access over the Internet. ICT4ID is one of the projects with a focus primarily on the needs of Indigenous people.

In this paper we will present an overview of the ICT4ID Project and a preliminary evaluation of its outcomes. We will do this in the context of concerns surrounding Indigenous peoples and ICTs, such as ICT access and ownership, Indigenous concepts of knowledge and intellectual property which impact on their use of ICT, the appropriateness of different technologies to Indigenous cultures, and issues of self-representation. We will also consider the main technologies for achieving intercultural dialogue. Our report on the Project is given in our capacity as the team appointed by UNESCO to conduct the evaluation. We believe that the outcomes of this Project can

provide valuable insights into the intersection of Indigenous culture and technology, and how Indigenous people can best engage in intercultural dialogue using ICTs.

2. Indigenous People and ICTs

2.1. INDIGENOUS ACCESS TO ICTS

The most obvious challenge to Indigenous people using ICTs for intercultural dialogue is their inadequate access to technology. Generally, Indigenous people have low computer ownership, low computer literacy, low connectivity to the Internet and low access to other digital technologies such as cameras, film-making equipment, editing equipment, etc. Exacerbating factors are the remoteness of many Indigenous communities – often located in regions where connectivity is difficult – and poor levels of literacy, particularly in English, the main computer language (Secretariat of the UN, 2003). The poverty of communities reduces their access because digital technology is expensive. In remote regions costs escalate: Internet connections via satellite are dearer than standard telephone-line or cable connections in the cities, and maintenance and repair services are likewise more expensive and prone to long delays because people have to be brought in from outside (Dyson, 2005). There is a lack of trained Indigenous ICT technicians to provide maintenance locally. In addition, supporting infrastructure, such as electricity, is often absent or intermittent.

A successful strategy for many Indigenous communities to overcome some of these problems is to build community technology centers (or telecenters) and communal film-making facilities, thus sharing the cost throughout the community and making it more affordable. The centers then offer training and support. By providing continued access, these centers also provide ownership of the media. Access and ownership are different degrees of community involvement and both should be perceived as important, especially in terms of sustainability of Indigenous ICT projects.

2.2. CULTURALLY APPROPRIATE TECHNOLOGIES

There are an estimated 350 million Indigenous people living in over 70 countries round the world, comprising 4% of humanity (UNESCO, 2005). They represent over 5,000 language and cultural groups. In the past, there were few computer programs in Indigenous languages and few technologies which were responsive to Indigenous cultures and Indigenous social, economic and geographical circumstance. However, the situation is beginning to change. Increasingly, there has been an interest in multimedia applications for Indigenous cultural preservation and revitalization. Multimedia offers a way of storing and displaying video, animations, photographs and sound recordings, and so fits with many characteristics of traditional Indigenous culture (Dyson, 2003). The latter are not written cultures, but founded in oral and audio practices (story telling, ceremony, song and music) and also in pictorial cultural forms (e.g., rock and wood carvings; ground, cave and body painting). Multimedia technology provides an ideal means for the repatriation of digital copies of items held in museums and other collections back to communities (Hunter, Koopman and Sledge 2003). These technologies include CD-ROMs and living cultural archive systems.

CD-ROMs have been used in various Indigenous cultural and language revitalization projects. They provide substantial storage, speed of access for large sound and image files, are inexpensive and do not require an Internet connection (Zimmerman, Zimmerman and Bruguier, 2000). A major disadvantage, however, is their relatively fixed content, which cannot be instantly updated by Indigenous viewers and so usually remains under the control of non-Indigenous producers.

In recent years multimedia has extended to the development of some highly sophisticated Indigenous living cultural archives, which allow a greater degree of input from Indigenous users. These are information systems which store multimedia files, display them to the viewer and, in the best systems, allow Indigenous people to add their own content or comment on existing items. The introduction of rights management features into the systems database can provide access controls to protect sacred knowledge, and to restrict access to defined groups (e.g., men or women, initiated versus uninitiated) or to defined times (e.g., during periods of mourning) (Hunter 2002). Improvements in the design of these systems have resulted in a shift from purely text-based lists of available multimedia items (e.g., Nyirti, used at the Wangka Maya Centre in Western Australia); to mixed graphical and textual interfaces arranged in windows (e.g., *Ara Irititja*, a system developed for the Anangu people of Central Australia); and now prototypes with interfaces almost purely of images based on video or virtual reality technology (e.g., *PathScape* and *Digital Songlines*) (Injie and Haintz, 2004; Hughes and Dallwitz, in press; Leggett, 2005; Leavy, in press). These last two prototype systems also provide for the first time a culturally appropriate conceptual model, moving away from the widespread 'desktop' metaphor, to one which allows cultural items to become available as the user moves through a representation of the landscape. This acknowledges the land as the source of meaning and the repository of story for Indigenous people (Turnbull, 2000). Further development of these living archives is needed to make them simple enough to be placed under the control of Indigenous communities, since at present they are usually designed and maintained by non-Indigenous people. Generally these systems are used within Indigenous communities and are aimed at creating a dialogue between elders and younger people, but not with people outside the community.

A further example of culturally appropriate technology is video, film and television. Again, like multimedia, these appeal to the visual strengths of Indigenous culture. Like the living cultural archives, Indigenous films, particularly those in Indigenous languages, have been used for cultural preservation and to pass on the culture to the younger generation. In addition, they have been used successfully for speaking to people outside the community and overcoming stereotypes (Córdova and Zamorano, 2004). More will be said about Indigenous people's use of film and video later in the context of intercultural dialogue.

Some progress has also been made in developing hardware which meets Indigenous needs of robustness and security. Touch screens, such as those used in the Ndjébbana language program at Maningrida in northern Australia (Auld, 2002), provide interactivity while removing the need for a mouse or keyboard, thus making the computer more suitable to outdoor use or situations where input devices might be removed or lost. The environmentally robust niri niri workstation, developed for the Anangu people from the Central Australian desert, houses a computer, printer and

uninterruptible power supply, and can withstand dust, sand, mice and power breakdowns (Hughes and Dallwitz, in press). Because it is mobile it can be taken outdoors to the locus of creative practice.

2.3. INDIGENOUS KNOWLEDGE AND INTELLECTUAL PROPERTY

ICTs represent a particular challenge to Indigenous concepts of knowledge and intellectual property. Indigenous communication can be regarded as 'high context', according to Hall and Hall's (1990) analysis. That is, knowledge is highly dependent on its context for validity: it belongs to a community, to a place and time, to knowledgeable elders who are carriers of culture, interpret its meaning and corroborate its authenticity (Harris, 1990). Placing Indigenous knowledge on websites, on CD-ROM or in a living archive poses the issue of decontextualization and knowledge attribution. Means have to be found in the design of the system to convey the context from which the knowledge arose, to indicate who the knowledge came from and corroborate their right speak about that topic. Further, Indigenous people have concerns over who has the right to knowledge and do not wish unauthorized members of even their own community, let alone outsiders, gaining access to material that is seen as sacred or secret, viewable only by the initiated or by people of a certain gender.

There is a widespread perception by many Web surfers that the Internet is the way of the free and there is a lack of understanding that material is covered by copyright laws. Indigenous people risk losing income from illegal downloads if their knowledge is placed on websites or distributed via CD-ROMs, and risk misappropriation of cultural artifacts by their re-incorporation into the works or products of others without permission (Radoll, 2004). In addition, existing intellectual property laws, with their focus on individual rights, fail to protect the collective ownership of Indigenous culture (Secretariat of the UN, 2003). For these reasons some Indigenous peoples may be reluctant to engage in intercultural dialogue with outsiders if it results in loss of control over their knowledge.

2.4. INDIGENOUS SELF-REPRESENTATION

Dominant discourses have traditionally given a biased and stereotyped view of Indigeneity (Iseke-Barnes and Danard, in press). They have redefined Indigenous cultures, taking them out of context and distancing them from the people who are being represented. They have objectified, commodified and appropriated Indigenous culture, reducing it to a few essential characteristics, to be used as a marketing tool, which further reinforces stereotypes. They have blurred the distinctions between separate Indigenous nations to produce a generalized misrepresentation of Indigenous peoples, an homogenized view. Such portrayals have necessarily confirmed the beliefs and biases of the dominant culture.

Indigenous mastery of ICTs allows Indigenous people control over how they are represented in the new media. Carlos Efraín Pérez Rojas, an Indigenous film-maker and video-activist from Mexico, believes in the need to provide a positive viewpoint and highlights the difference between Indigenous self-representation and non-Indigenous representation:

It's important to say that there's more than just hunger, pain and poverty in Native communities. Solutions are also being offered. ... I've noticed that views from outside tend to show indigenous peoples as victims, the gaze is attracted to the sandals, the hungry people, the dirty child. ... When Native people represent themselves they show more dignity. ... Of course I talk about the problems that exist, but I will also offer a message that brings hope (quoted in Zamorano, 2005).

Indigenous self-representation avoids stereotyping by juxtaposing traditional cultural elements with the modern reality of Indigenous people's lives, and is a way of embracing the new order and working through issues on their own terms (Guenther, 2002). Moreover, it portrays a collective vision and allows a community process to evolve around the work produced. Mariano Estrada Aguilar, a Tzeltal film-maker from Mexico, notes that, 'In reality I am not an independent videomaker – while the technical questions of videomaking are solved individually, the feeling and content of my videos belong to the people' (quoted in Córdova and Zamorano, 2004).

3. ICTs, Intercultural Dialogue and Indigenous People

The Global Forum of Indigenous Peoples and the Information Society voiced their principal interest in intercultural dialogue as a desire for 'control over information that is distributed about them' (Secretariat of the UN, 2003, p. 17). They objected to the media disseminating incorrect information, particularly about Indigenous women. In addition, they found the exclusion of the voices of women a concern and sought 'full and effective participation of women' in the information society (Secretariat of the UN, 2003, p. 17).

Intercultural dialogue can also be intergenerational. The Global Forum of Indigenous Peoples called for partnerships to 'Develop and promote ICT projects that motivate all young learners (including indigenous youth) to understand other cultures and also to take part in the preservation of their own cultures' (Secretariat of the UN, 2003, p. 13).

3.1. INDIGENOUS PEOPLE ON THE WEB

The Internet has provided an excellent medium for intercultural dialogue for Indigenous people, both to a non-Indigenous audience and between Indigenous nations. It has given a means of communication and a way of presenting their ideas and world view. Communication with the broader community via the Web is required to correct false representations and stereotypes of Indigenous people and their culture (McConaghy, 2000). Indigenous people were early participants in the Web and their participation has been 'vigorous and successful' (Nathan, 2000, p. 39). By contrast, in conventional print media Indigenous people continue to be significantly underrepresented. Nathan sees the catalyst for Indigenous participation lying in the intrinsic nature of the Web, particularly the way it challenges standard notions of literacy, its interconnectivity, and the fact that it is still 'soft' and can be shaped by those who engage it. The Web's multimedia platform fits well with Indigenous culture and speaks to its strengths in art, music and orality. Moreover, its lack of any set hierarchy, its absence of any 'unifying

force from above', allows many viewpoints and opens the way for minority groups, such as Indigenous people, to regain control of their knowledge, rather than have knowledge about them filtered through scientists, anthropologists and others (Levy, 1997, p. 251).

Most Indigenous websites which are accessed by outsiders could be said to promote intercultural dialogue, but there are also sites for which this is the primary function. In many parts of the world political advocacy sites are needed to further goals of self-determination, land rights and in some cases the achievement of self-government. Websites raise the visibility of Indigenous cultures and highlight issues which impact on them particularly, such as assimilation, exploitation of their traditional lands and resources, and economic and social issues. The use of non-Indigenous languages, such as English, by some of these websites show that they are primarily focused on intercultural dialogue with people from outside their community.

3.2. INDIGENOUS FILM-MAKING AND LOCAL CONTENT

Advances in digital technology have brought film-making within the reach of Indigenous communities. With the advent of video, audiovisual language was liberated through new forms of expression, more accessible equipment, and significantly diminished production costs. This renewal unleashed a great quantity of independent productions including those of Indigenous peoples. Video technology has enabled Indigenous people to proceed from the oral to the video image without necessarily going through the intermediate phase of writing and books. This was unthinkable a few decades ago. A vibrant film-making culture has grown up in many parts of the world, allowing Indigenous people to record their culture for themselves and sometimes distribute it more widely. A good example of this is Mexico, where in the early 1980s local NGOs provided assistance to help community media groups begin to make video and radio to document their culture and political viewpoints (Córdova and Zamorano, 2004). There are now over a dozen media organizations responsible for Indigenous training and production, with four Indigenous regional media centers. Films are screened at community level and at regional festivals, with subtitling of films in English carried out in the USA to allow for wider dissemination.

In South America, Bolivia is at the forefront of Indigenous peoples' use of digital video technologies. The country has been one of the regional centers for Indigenous media production in recent years, for example, hosting the regional office of CLACPI, the Latin American Indigenous Council of Film, Video and Communications from 1996 to 2005 (Salazar, in press). The Bolivian Plan of Indigenous Audiovisual Communications, designed in 1996, constitutes a concrete outcome of a long process by which several Indigenous and peasant organizations in Bolivia established a long term scheme of audiovisual communication in conjunction with CEFREC, an independent Film Education Centre. Mainly working with video, but recently with other technologies as well, such as community television, it is interesting to note how Indigenous people in Bolivia have been able to start inserting their cultural narratives into broader spheres, based on their ancestral forms of communication and representation. Through this scheme, a varied and thriving Indigenous media practice has emerged, establishing the foundation for a series of exchanges at the national level

that allow for the continuation of traditional forms of oral and collective memory. As such, video has come to be conceptualized as a tool for empowerment and as a tactic to elaborate an ambitious strategy for cultural survival, promoting a more democratic and multicultural participation in the mass media. Indigenous video constitutes a new genre of intellectual production where traditional knowledge is reinterpreted and re-evaluated. By creating a circuit of production, dissemination and reception of video parallel to academic intellectual production Indigenous video marks an end to the hegemony of literacy and begins a decolonization of the technologies of the intellect.

The production and distribution of local content is an essential component of the ICT4ID Project, often interpreted as film content. Some commentators make a distinction between two quite different interpretations of the term 'local content':

- Firstly, it can describe content relevant and applicable only to the community which produced it.
- Secondly, it can refer to content that 'reflects local realities but resonates in the global consciousness' (Hampton, 2004, p. 3).

In the context of intercultural dialogue it is this last interpretation which is most appropriate, although some communities may well be more interested in the relevance of content to themselves, especially if they have invested time, commitment and expense in developing it. Both interpretations therefore need to be considered.

To develop local content it is necessary to take a holistic approach which includes training, content production and distribution. One also needs a long-term view aimed at capacity building within the community rather than a short-term approach which only lasts the life-time of the project (Hampton, 2004).

3.2.1. Training

Training covers pre-production, planning and design skills; script writing; use of digital cameras, video-cameras and sound recording equipment; web design and graphics skills; editing and post-production skills (UNESCO 2005). It requires experts, hands-on workshops, short training courses and video tutorials. Training is essential if local content production is to be owned by the local community and not imposed or driven from outside. Ultimately, for complete self-determination, it should aim at training a first generation of Indigenous creators who can take charge of training their people in the future. This has already been achieved in some parts of Latin America.

3.2.2. Production

Content production needs to be appropriate to the Indigenous community's needs and aspirations and must be inclusive, allowing both women and men in the community, young and old to be actively involved.

Production also needs to fall within the available resources of equipment, infrastructure and skill levels. This represents one of the greatest challenges in Indigenous communities, which are often poor and living in remote, poorly-served regions. Fortunately, digital technology has made it possible to produce high quality content relatively easily and much more cheaply than before (Montes, 2003). Unlike many other technologies, the cost of ICTs has fallen over time and this trend is likely to continue into the foreseeable future.

The medium that the content takes will vary and needs to fit with available technology for viewing and listening if it is to be relevant to the people who produced it. Some commentators suggest choosing media on the basis of its existing reach: whereas 2.5 billion households around the world listen to radio and 1.5 billion households own a television, only about 600 million people are estimated to have access to the Internet (Hampton, 2004). Most developing countries have good broadcast facilities but electricity and telecommunications infrastructure to support computing and Internet access in remote regions may be lacking. Balancing this is the fact that Internet access is growing exponentially and satellite delivery now means that potentially any person on the planet can get broadband access to the Internet. Solutions such as community technology centers mean that multimedia production for viewing on living cultural archives or CD-ROMs may be an appropriate base for local content production, in addition to film and video.

3.2.3. *Distribution*

The biggest challenge in local content development is gaining access to national and international distribution channels. Over the same period as advances in digital technology made production cheaper and easier, the aggregation of media conglomerates made distributing and broadcasting small independent works more difficult. The 1980s and '90s saw the formation of global distribution networks and the merger of many media companies. Whereas in 1983 there were fifty leading media corporations, by the end of the 1990s there were only ten (Bagdikian, 2000). The top five exporters of cultural products are the USA, Germany, France, Britain and China, and account for 53% of the global trade (UNESCO, 2000). Today an estimated 85% of all films screened around the world come from Hollywood (Hampton, 2004). There is also a dividing line which operates *within* countries and ensures that the culture of certain social groups dominates whereas that of less powerful groups, such as Indigenous people, goes unnoticed (Montes, 2003).

To offset this, the Internet is an effective medium for the promotion and delivery of local content through websites, online catalogues and downloadables, particularly for promoting intercultural dialogue with mainstream audiences (UNESCO 2005). Using the Internet circumvents the media distributors. However, the Internet can also be used to push external content onto local communities: investment in local content production is needed to reverse the direction (UNESCO, 2005).

Connected with the idea of local content distribution is the foundation of cultural 'industries' based on cultural 'goods' and services (UNESCO, 2002). Montes (2003, p. 8) roundly rejects this industrialization of culture and questions 'what the impact on these contents created in different contexts and not designed as commodities, is when they are transplanted onto the world cultural commodities market.' For Indigenous people this commodification poses the threat of distortion of their voice, the turning of their culture into a museum piece, and the overemphasis on the exotic (Barbero and Ochoa Gautier, quoted in Montes, 2003). To avoid this Indigenous people need to be in control of decisions regarding how their cultural content is distributed.

4. The ICT4ID Pilot Projects

The five ICT4ID pilot projects began operations in early 2004 and concluded some time in 2005. Each project consisted of three main phases:

1. A training phase in some aspect of using ICTs for local content production or cultural preservation.
2. A production phase, in which cultural content was produced or managed.
3. A dissemination phase, where the results of phase 2 were shown locally, nationally or internationally.

The goals of the Project as a whole are described variously as:

- ‘Preserving indigenous peoples’ cultural resources by fostering access to ICT, thus contributing to narrowing the digital divide’.
- ‘fostering the use of ICTs to contribute to revitalizing their identity and at recovering their cultural self worth and dignity.’
- ‘enabling the management of indigenous cultural resources and the training of stakeholders’ to acquire greater mastery of ICTs, opening up new opportunities for traditional and innovative income generating activities’ (UNESCO, n.d.).

The target output is defined as:

- ‘Preserving indigenous peoples’ cultural resources by fostering access to ICT, thus contributing to narrowing the digital divide’.
- ‘Indigenous community representatives trained in media content production and ICT use.
- Indigenous cultural content produced for television, radio and new media.
- Awareness raised at the international level of indigenous creativity.
- Advocacy made on the importance of cultural diversity and its expression through ICTs.
- Reinforcement of intercultural dialogue through the inclusion of indigenous peoples cultural expressions in knowledge societies’ (UNESCO, n.d.).

In addition, the Guidelines for the Final Formulation of the Projects emphasized two important issues:

1. The participation of the Indigenous community in framing the pilot project.
2. Project sustainability, including:
 - (a) Cultural sustainability.
 - (b) Economic sustainability.

The five pilot projects are summarized in Table 1. Brief descriptions of each of the projects follow.

Table 1. The Five Pilot ICT4ID Projects.

Project Name	Kaoko Local Knowledge Living Archive	San Interactive Archive, Training and Heritage Management Programme	Audiovisual Training for the Forest People of Gabon	Tokapu	Training of Indigenous People in Audiovisual & Community Television Production
Indigenous People	Himba	San	Bakas, Babongo, Akula, Bakoya (Pygmies or Forest People)	Quechua	Leco, Tsimane, Esse Eja, Mosetene, Tacana, Aymara, Quechua
Region	Africa			South America	
Location	Kaoko, Namibia	South Africa and Namibia	Gabon	Lima, Peru	La Paz and Alto Beni, Bolivia
Medium	Multimedia		Audiovisual		
Aims	Revive Himba oral history	Enable San to manage their heritage and create their own cultural contents	Intercultural debate between Forest People and dominant ethnic groups of Gabon	Intercultural dialogue between Indigenous & westernised populations of Peru	Develop Indigenous audiovisual skills in television production
Products	<ul style="list-style-type: none"> ▪ 50-min documentary 'Ochre and Water' ▪ Interactive DVD living archive ▪ Feasibility study for ICT Centre 	<ul style="list-style-type: none"> ▪ Heritage exhibitions ▪ Short DVD on San culture ▪ Interlinked interactive archival packages 	<ul style="list-style-type: none"> ▪ 38-min. documentary ▪ 3½ min. music clip 	<ul style="list-style-type: none"> ▪ Eight 20-min. video documentaries 	<ul style="list-style-type: none"> ▪ Four 20-min. television documentaries and one 20-min. fiction film
Skills Development	<ul style="list-style-type: none"> ▪ Training of ICT Centre manager ▪ Training of manager to train others 	<ul style="list-style-type: none"> ▪ Training in heritage management 	<ul style="list-style-type: none"> ▪ Audiovisual training (15 days) ▪ Cultural training 	<ul style="list-style-type: none"> ▪ Audiovisual training (12 weeks) ▪ Classes in Quechua culture 	<ul style="list-style-type: none"> ▪ Audiovisual workshops (6 mths)

Participants	1 Himba ICT Centre manager and assistant filmmaker	2 San trainee heritage managers	6 Pygmy trainee filmmakers	10 Quechua youth	22 Indigenous participants
Collaborators	<ul style="list-style-type: none"> ▪ Doxa Productions ▪ Multidisciplinary team from Cologne and Cape Town Universities 	<ul style="list-style-type: none"> ▪ Khwa Ttu San Centre ▪ Doxa Productions ▪ Mindfield LAMP 	<ul style="list-style-type: none"> ▪ Latitud Film ▪ French filmmaker Jean Claude Cheyssial ▪ Bordeaux³ University, France 	<ul style="list-style-type: none"> ▪ Asociación Cultural Integración Ayllu-Wari ▪ French anthropologist and filmmaker Elif Karakartal 	<ul style="list-style-type: none"> ▪ CEFREC ▪ Bolivian filmmaker Ivan Sanjinés
Project Phases	<ol style="list-style-type: none"> 1. Film production 2. Building of ICT Centre 3. DVD production 	<ol style="list-style-type: none"> 1. Heritage training 2. DVD production 3. Interactive archive (possible) 	<ol style="list-style-type: none"> 1. Training 2. Film production and post-production 3. Film production (fiction) 	<ol style="list-style-type: none"> 1. Training 2. Film production 3. Screenings in local cultural centres, local NGOs and local TV 	<ol style="list-style-type: none"> 1. Workshops 2. Video production 3. Community screenings; regional and national broadcast

4.1. KAOKO LOCAL KNOWLEDGE LIVING ARCHIVE (NAMIBIA)

The objective of this project was to revive the oral history of the Himba, a semi-nomadic people who live in the Kaoko region in the north-west of Namibia. The project tried to achieve this through three activities. Firstly, Doxa Productions, a documentary company based in South Africa, made the documentary 'Ochre and Water'. Secondly, a feasibility study was conducted to establish an ICT Centre in Kaoko for the recording of Himba oral history and also to assist with economic and social development through providing information on education, political representation, HIV, cattle diseases and tourism. Cornelius Tijuma, a Himba man, was trained in ICT to manage the centre and to be the centre's computer trainer, as well as receiving some training while assisting Doxa in film-making. Lastly, a video 'walk-through' of a prototype living archive of Himba culture was prepared as a DVD-ROM by a multidisciplinary team of anthropologists, film makers and DVD designers. The cultural archive acts as an interactive portal to Himba film and sound recordings. This is intended eventually be made available to the Himba at the centre.

4.2. SAN INTERACTIVE ARCHIVE, TRAINING AND HERITAGE MANAGEMENT PROGRAMME (SOUTH AFRICA AND NAMIBIA)

The three phases of this project aimed at enabling the San people to manage their cultural heritage and create their own cultural content. In the first phases, which took place in October to December 2004, two San heritage management trainees studied San history, research methods, business skills, tour guide skills and multimedia and visual

archiving, selecting films from the Doxa and other existing archives. This training equipped them for organizing heritage exhibitions in their own communities. In the next phase, the Khwa Ttu San Centre and Mindfield LAMP (Living Archive Management Project) – collaborators on the project – created a short narrative about San culture on DVD, consisting of film clips from documentaries filmed by Doxa over the years. If sufficient funds can be raised, an interlinked interactive archival package is to be produced in collaboration with members of the San communities: this will be used to create documentaries, short narratives, animations and DVDs.

4.3. AUDIOVISUAL TRAINING FOR THE FOREST PEOPLE OF GABON

The aim of this project was to raise awareness of the value of Pygmy culture among the dominant Bantu and Fang population of Gabon and to promote intercultural debate. The six Pygmy participants firstly received 15 days of training in audiovisual techniques and local culture. In the second phase they collaborated to produce a 35 minute documentary, shot in DVDCAM PAL. In addition, a short music clip was produced. Post-production work for these was performed by the French collaborators on the project. The documentaries were shown at the French Cultural Centre in 2006, and plans exist to show them on Gabon television and in a travelling cinema throughout the country.

4.4. TOKAPU PROJECT (PERU)

The Tokapu project took place in Villa El Salvador, a district of Lima inhabited by Quechua people who began to migrate from their traditional lands in the Sierra to the capital in the 1940s. Project participants were 10 young Quechuas, the offspring of those who migrated. The aim of the project was to initiate an intercultural dialogue between the ‘occidentalized’ and Indigenous populations of Peru. In the training phase, participants learnt audiovisual production techniques as well as studying traditional Quechua culture including their history and the Quechua world view, artistic expression and narrative skill. Each then produced a 20-minute documentary reflecting their understanding of the Quechua world view. In the final phase, the documentaries shown at local screenings, in a traveling cinema, on national Peruvian television and at a screening in Paris.

4.5. TRAINING OF INDIGENOUS PEOPLE IN AUDIOVISUAL AND COMMUNITY TELEVISION PRODUCTION (BOLIVIA)

This project is managed by the Centro de Formación y Realización Cinematográfica (CEFREC), whose objectives are to encourage Bolivia to reflect on Indigenous issues. CEFREC does this by facilitating the participation of Indigenous Bolivians in the media and by promoting the production and broadcasting of Indigenous videos and films. Furthermore, these ICT4ID pilot programs are framed within part of a National Plan of Indigenous Audiovisual Communication, begun in 1996 by the major Bolivian Indigenous organization (CAIB), which aims at developing Indigenous audiovisual production and broadcasting skills. Twenty two Indigenous people participated in the project. During the first phase, conducted in the second half of 2004, they received

training in audiovisual techniques. In the second phase, they produced four documentaries and one fiction film, each of about 20 minutes duration, for television. The third phase consisted of screenings of the films in their local communities as well as television broadcast at a regional and national level.

5. Evaluation

Four sources of information were used to evaluate the projects:

1. UNESCO provided extensive documentation, including the initial project proposals, background documents, responses from a few participants to their training, and a full evaluation document for the Bolivian project. These were read and evaluated against the various Project goals.
2. A DVD was produced by each project and these were evaluated in two areas: Content and Form. For Content, criteria included whether the Indigenous people had devised and created the content themselves; clarity of the message given for intercultural communication purposes; the incorporation of traditional languages, knowledge and forms of expression; the inclusion of current and historical issues of importance to the communities; and an evaluation of the story. Under Form, we evaluated the visual grammar; sound; editing and narrative structure; and overall production values. For each criterion, ratings for 'needs more work', 'satisfactory', 'good', 'very good' or 'not applicable' were given, and then overall comments and recommendations were arrived at following this.
3. Questionnaires were prepared for the project managers of each project to answer and for the trainees to answer, if necessary being administered by the project manager. Since the results of this part of the evaluation have not been finalized we will reserve details to a later date.
4. An on-ground evaluation of the two South American projects was attempted. Only the Bolivian projects proved amenable to a visit: the project manager and a number of the participants were interviewed and the operation of the film-making centre in La Paz was inspected.

Hence most of the preliminary evaluation which follows derives from an evaluation of the DVD films produced and the Project documentation.

5.1. EVALUATION OF THE KAOKO LIVING ARCHIVE AND DOCUMENTARY (NAMIBIA)

Doxa Productions, a professional film-making company, produced and directed the documentary 'Ochre and Water' and are collaborating on the development of the living cultural archive, still in a prototype phase, which shows Doxa film clips of Himba culture from 'Ochre and Water' and a previous documentary. Both 'Ochre and Water' and the living archive appear on the DVD distributed by UNESCO. All the documentary footage is of an extremely high professional standard with excellent production values. Also the archive is of very high quality, apart from occasional sound problems. It represents a distinct advance on any of the existing Indigenous cultural archiving systems, with its culturally appropriate interface showing a Himba hut, Story

Tree, etc., in a Kaoko landscape as entry points to the film clips. The landscape interface shows the strong link between the Himba and their land. It also succeeds in acknowledging the graphical basis of much Indigenous culture, by avoiding the use of text except as prompts.

The content of the documentary and archive focuses on an issue of prime importance to the Himba, the conflict with the Namibian government, who wish to build a dam on Himba land and over the graves of the ancestors. As background to this topic some traditional Himba knowledge and some traditional cultural forms, like songs and ceremonies, are shown and the Himba language is widely used, supported by subtitles for communication to a wider audience. However, the archive in particular would benefit from more traditional stories and knowledge.

The main issue with the project, particularly the documentary, is the lack of self-representation. Even though there is a change in participation levels between the earlier documentary and the archive – Himba are listed as ‘collaborators’ in the archive, and collaboration is also implied in some scenes – most of the film-makers (and presumably all the programmers of the system) are still non-Indigenous, with the exception of the one trainee assistant. The commentary, delivered by non-Himba voices (e.g., ‘journey I made as a film maker from South Africa’), confirms this question of representation.

There are also serious issues of sustainability, given the one trainee, and the lack of complete film-making training for him. Further documentary production is presumably dependent on Doxa or some other outside film-maker.

5.2. EVALUATION OF THE SAN DVD (SOUTH AFRICA AND NAMIBIA)

The DVD produced from a collaboration between Doxa and one of the San cultural centres, is again based on Doxa documentaries, in this case taken over many years, some dating back to the 1980s. Like all Doxa material, it shows generally good production values, although not quite as sophisticated as the graphic overlays of their latest work on the Himba. The content shows some traditional knowledge, language and cultural forms (e.g., trance dancing), but not a lot, with the exception of one film. However, there is good treatment of historical issues in some of the material.

The problem is that here again we have representation by an outsider gaze. This often resorts to portraying the San as victims, focusing on modern social problems and conflict with other ethnic groups and the government. In the worst films a cliché-ridden commentary is provided: ‘life in the settlement quickly corrupted an innocent people’, ‘make the transition from the Stone Age to the twentieth century’, etc. The early date of some of the material may help to explain this.

Amongst the collection, there is one film which stands out as quite different, produced during the UNESCO project: a film focusing on language issues featuring, among other segments, an interview between one of the trainees and her mother, a language expert. During the interview we have a sense of real collaboration and participation between the San (trainee interviewer and interviewee) and the film director. This provides significant traditional language and cultural content in this one film, and gives a positive portrayal of San people and their culture.

5.3. EVALUATION OF FILMS BY THE FOREST PEOPLE OF GABON

The main film produced by the Forest People, or Pygmies, shows both the modern-day reality of their lives as well as traditional cultural practices. The main language is French but there is a reasonable amount of their traditional language. It thus gives a balanced view of a people living in the modern world while maintaining their culture. It does not stereotype them. Though women were not included among the film-makers, there are three female participants with reasonably prominent roles and this, together with the scenes of children, gives some sense of inclusiveness, although generally the men dominate since interviews showing the trainees must inevitably be of men.

Generally the film is fairly well-made with reasonable production values. However, it is not a totally professional production, unlike the work by Doxa. Against the less than perfect production values, one must balance the fact that the documentary was made by the Indigenous people themselves, apart from postproduction work which was performed by French collaborators. That is, the Forest People wrote the script, shot the scenes, and had decision-making roles over the production. None of the trainee film-makers had ever made a film before. Hence, the documentary represents a notable achievement both for them as individuals and for their community. It also shows the worth of self-representation: the people are portrayed with dignity and their culture is presented in a positive light. Testimonies at the end of the film show the participants keen to complete their training to cover all aspects of the film-making process, obviously necessary if the project is to become self-sustaining and locally controlled.

5.4. EVALUATION OF THE TOKAPU FILMS (PERU)

Like the documentary from Gabon, these short films are made by the people themselves. Unlike the Forest People, the Quechua participants from Villa El Salvador in Lima produced the films from beginning to end, including post-production work. Overall production is reasonable and content is interesting and varied, with some traditional Quechua culture, language and forms of expression portrayed, although the focus is on their modern reality. Most of the films are structured around a simple narrative that communicates easily to a local as well as an international audience. What is very interesting in these video programs is the dilemma put forward by all the participants on the migration to the big city and the struggle between two strong forces; the voice of tradition and cultural survival, and that of adaptation to a modern, capitalist, urban environment. Importantly, it is the use and conceptualization of video technology as appropriate cultural communication media that is at work here.

5.5. EVALUATION OF THE BOLIVIAN FILMS

There are five Bolivian films in total, four documentaries and one work of fiction. One of the documentaries shows the film training sessions and shoots, film-making facilities, and interviews with trainers and trainees, including trainee directors, camera people, actors, television presenters, etc. In short, it forms an evaluation of the project from the perspective of those who participated in it. The facilities and training are seen to be extremely well organized, with a great deal of enthusiasm demonstrated by the Indigenous people involved. Trainers are local, and not brought in from outside. The

interesting aspect of the Bolivian project is the emphasis on community television and the viewer sees short examples of television shows produced.

The production values are generally good and the content demonstrates the value of self-representation. The viewer gains a holistic portrait of the Indigenous communities. We meet children, women and men. We see the towns and villages set in the evocative context of their beautiful traditional lands. Customary knowledge and cultural practices are presented side-by-side with modern industries and modern life. The voice is *always* that of the local Indigenous people, *never* the outsider. In the fiction film the entire dialogue is in the Indigenous language, supported by subtitles in Spanish for intercultural communication. This film is an imaginative linking of traditional culture (invocations of tree, water and animal spirits) to current concerns over land appropriation and deforestation. It would be hard to imagine this film produced by outsiders.

5.6. OVERALL EVALUATION – ALL PROJECTS

All of the pilot projects were successful in achieving the ICT4ID Project's primary goals and achieving at least some of the target outcomes. A DVD was produced from each project, which serves as a record of the Indigenous people's culture. At least two ICTs were explored in the projects: film and living cultural archives. The participants all received training, and early comments from some participants showed that they enjoyed it and learnt a lot about ICTs and/or their culture. Intercultural dialogue was initiated through the DVDs, which will be distributed by UNESCO, and through screenings that have already taken place.

Some of the more long-term goals of the Project have been harder to achieve over the short duration of the pilots. For example, the digital divide may have been narrowed, but many of the participants still do not have a full complement of ICT skills to continue unaided. Because of this they are unlikely to engage in new income generating activities in the long term, although many of them were paid during their training. The cultural sustainability of all the projects, except the Bolivian one, is in doubt since it remains unclear if the Indigenous people have the skills to continue their work alone. The small number of trainees in the Namibian and South African projects (one Himba man and two San women) raise further questions of whether the work commenced is sustainable. A major issue, which surfaced shortly after the completion of the Tokapu project in Peru was the appropriation of the film-making equipment by one segment of this community. Ownership of the equipment had formed the subject of debate early on and obviously had not been resolved satisfactorily. The project is not sustainable until issues such as these are settled. Complete reasons for this incident are not clear, but there appears to have been a lack of clear community consensus and lack of ownership of the project.

By contrast, the Bolivian project has proven to be sustainable. Participants have grown from 22 to 30 over the last year and have progressed to the making of more fiction films. The reasons for this sustainability can be found in the strong support of local communities and organizations, and the embedding of the project in a funded and well-established Indigenous film-making and training structure through organizations like CEFREC and CAIB. Moreover, it forms part of the National Audiovisual

Communication Scheme. The Bolivian case could perhaps be used as an example of best practice and provide a model for introducing video production into other Indigenous communities in South America or further afield.

For the remaining projects, issues still need to be addressed in order to provide a measure of sustainability. Some of the Forest People of Gabon have spoken on their DVD of their desire for training in editing and post-production skills, and this request needs to be seriously considered if they are to acquire control of the complete film-making process and continue to make films representing their culture to other Indigenous communities and to the outside world. On the other hand, the experience of the Tokapu project in the Quechua community in Peru seems to indicate that funding alone will not be sufficient to provide long-term sustainability, but that community divisions need also to be resolved.

Most importantly, the projects must place Indigenous creativity at their centre: it should be an Indigenous eye behind the lens, an Indigenous person's hands on the computer keyboard. The most successful local content – successful in that it demonstrates Indigenous self-representation, not necessarily the perfection of the professional – are those from Bolivia, Peru and Gabon, where self-representation was allowed to happen. The content produced in the Himba and San projects in Namibia and South Africa shows too much the imprint of the non-Indigenous collaborators, even though, no doubt, the three Indigenous participants benefited from the projects.

6. Conclusion

ICTs can be significant tools to aid cultural preservation and revitalization in Indigenous communities and to promote intercultural dialogue. Though only two forms of ICT were used in the ICT4ID pilot projects, other technologies are available which could assist, such as websites and CD-ROMs. Concerns over viewing sacred or secret knowledge did not seem to arise in any of the projects, although this could be an issue in the future if Indigenous people wish to record these areas of their culture. Likewise, the issue of intellectual property seemed to have resolved itself, at least in the immediate term, by proper attribution of the authorship of the films, recompense in terms of training received or remuneration during the project, and copyright warnings on the DVDs.

A preliminary evaluation of the results show that all the projects have been successful in producing local content and providing at least some measure of distribution. However, projects have had varying success in terms of sustainability and varying success in achieving Indigenous self-representation. More trainees would be desirable in the communities and a better gender balance in the African projects to ensure that their cultures are represented more fully and that different voices are heard. In the future, it is important that Indigenous people take centre stage in *all* the projects and that *their* eye is behind the camera. There is no reason to believe, given the successful example in Bolivia, that Indigenous people cannot achieve full mastery of these media. In addition, they should receive full training to complete a project from beginning to end. Further investment will be needed to bring this about and to continue the work begun by UNESCO in this pilot.

Acknowledgements

The authors would like to thank UNESCO for inviting us to participate in this project and, in particular, we thank the Indigenous peoples for sharing their cultures and their insights with us through the documentaries they made, or helped to make. We wish them well in their future endeavors with ICTs.

References

- Auld, G.: 2002, The role of the computer in learning Ndjébbana, *Language Learning & Technology*, 6(2), 41-58.
- Bagdikian, B. H.: 2000, *The Media Monopoly*, 6th ed., Beacon Press.
- Córdova, A. and Zamorano, G.: 2004, Mapping Mexican media: Indigenous and community video and radio, *Native Networks*, available at: www.nativenetworks.si.edu/eng/rose/mexico.htm (accessed 17 January 2006).
- Dyson, L.E.: 2003, Indigenous Australians in the information age: Exploring issues of neutrality in information technology, in C. Ciborra, R. Mercurio, M. De Marco, M. Martinez and A. Carignani (eds), *New Paradigms in Organizations, Markets and Society: Proceedings of the 11th European Conference on Information Systems (ECIS), Naples, Italy, 19 – 21 June 2003*.
- Dyson, L.E.: 2005, Remote Indigenous Australian Communities and ICT, in S. Marshall, W. Taylor and X.-H Yu (eds), *Encyclopedia of Developing Regional Communities with Information and Communication Technology*, Idea Group Reference, Hershey.
- Guenther, M.: 2002, Tradition & modernity in contemporary San art, *Cultural Survival Quarterly*, March 31, 26(1).
- Hall, E. T. and Hall M. R.: 1990, *Understanding Cultural Differences*, Intercultural Press, Yarmouth, USA.
- Hampton, A.: 2004, A hitchhiker's guide to the information highway, *UNESCO Discussion Paper: Producing Local Content for Cultural Diversity*, UNESCO, Paris, pp. 1-21.
- Harris, S.: 1990, *Two-Way Schooling: Education and Cultural Survival*, Aboriginal Studies Press, Canberra.
- Hughes, M. and Dallwitz, J.: in press, Ara Irititja: Towards Culturally Appropriate IT Best Practice in Remote Indigenous Australia, in L. E. Dyson, M. Hendriks and S. Grant (eds), *Information Technology and Indigenous People*, Idea Publishing, Hershey.
- Hunter, J.: 2002, Rights Markup Extensions for the Protection of Indigenous Knowledge, *Global Communities Track, WWW2002, Honolulu, May 2002*. Available at: www2002.org/CDROM/alternate/748/ (accessed 29 Jan. 2004).
- Hunter, J., Koopman, B. and Sledge, J.: 2003, Software tools for indigenous knowledge management, *Museums and the Web 2003 Conference*, Charlotte, March 2003.
- Injie, L. and Haintz, F.: 2004, The natural development of Wangka Maya into the direction of a knowledge centre, presentation given at *Indigenous Studies – Sharing the cultural and theoretical space: AIATSIS Conference 2004*, Canberra.
- Iseke-Barnes, J. and Danard, D.: 2002, Indigenous knowledges and worldview: Representations and the Internet, in L. E. Dyson, M. Hendriks and S. Grant (eds), *Information Technology and Indigenous People*, Idea Publishing, Hershey.
- Leggett, M.: 2005, Indexing audio-visual digital media: the PathScape prototype, *Scan*, 2(2). Available at: <http://scan.net.au/scan/journal/index.php> (accessed 2004).
- Leavy, B.: in press, Digital Songlines – Digitising the arts, culture and heritage landscape of Aboriginal Australia, in L. E. Dyson, M. Hendriks and S. Grant (eds), *Information Technology and Indigenous People*, Idea Publishing, Hershey.

- Levy, P.: 1997, Education and training: New technologies and collective intelligence, *Prospects*, 27(2), 249-63.
- McConaghy, C.: 2000, The Web and today's colonialism, *Australian Aboriginal Studies*, 1 & 2, 48-54.
- Montes, R.: 2003, Facing the facts: Notes for revisiting the debate on policies to promote cultural diversity and local content, Working Paper 3, *International Forum on Local Cultural Expression and Communication*, Santo Domingo, Dominican Republic, 3-6 November, 2003, UNESCO, pp. 1-13.
- Nathan, D.: 2000, Plugging in Indigenous knowledge: connections and innovations. *Australian Aboriginal Studies*, 1 & 2, 39-47.
- Paillan, J.: 2004, Indigenous Media and Communication Rights in Chile, Address at forum and film screening, Sydney, Australia, 9 December.
- Radoll, P. J.: 2004, Protecting copyrights on the Internet: A cultural perspective from Indigenous Australia, in F. Sudweeks and C. Ess (eds), *Proceedings of the Fourth International Conference on Cultural Attitudes towards Technology and Communication (CATaC)*, Karlstad, Sweden, Murdoch University, Murdoch, Australia, pp. 339-348
- Salazar, J. F.; in press, Indigenous Peoples and the Cultural Constructions of Information and Communication Technology (ICT) in Latin America, in L. E. Dyson, M. Hendriks and S. Grant (eds), *Information Technology and Indigenous People*, Idea Publishing, Hershey.
- Secretariat of the United Nations Permanent Forum on Indigenous Issues: 2003, *The Report of the Global Forum of Indigenous Peoples and the Information Society*, World Summit on the Information Society, Geneva, Switzerland, 1-34.
- Turnbull, D.: 2000, *Masons, Tricksters and Cartographers: Comparative Studies in the Sociology of Scientific and Indigenous Knowledge*, Routledge, London.
- UNESCO: 2000, *Study on International Flows of Cultural Goods between 1980-1998*, Paris.
- UNESCO: 2002, *UNESCO Universal Declaration on Cultural Diversity*, Adopted by the 31st Session of the General Conference of UNESCO, Paris, 2 November 2001.
- UNESCO: 2005, ICT4ID, 28 February, available at: http://portal.unesco.org/culture/en/ev/php-URL_ID=14203&URL_DO=DO_TOPIC&URL_SECTION=201.html (accessed 18 April 2005).
- UNESCO: n.d., *ICT4ID*, Paris.
- Zamorano, G.: 2005, Community video and self-representation: Interview with Carlos Efraín Pérez Rojas, *Native Networks*, April.
- Zimmerman, L. J., Zimmerman, K. P. and Bruguier, L. R.: 2000, Cyberspace smoke signals: New Technologies and Native American Ethnicity, in C. Smith and G. K. Ward (eds), *Indigenous Cultures in an Interconnected World*, UBC Press, Vancouver, pp. 69-86.
- Cite paper as: Dyson, L. E., Salazar, J. F., Hendriks, M., Underwood, J. & Kay, R. (2006), 'ICTs for Intercultural Dialogue: An Overview of UNESCO's Indigenous Communications Project', in Sudweeks, F., Hrachovec, H. & Ess, C. (eds.), *Fifth International Conference on Cultural Attitudes towards Technology and Communication (CATaC)*, Tartu, Estonia, 28 June – 1 July 2006, pp. 340-359.